

# OBL Sensor Specification

## Type: OOD103-FDS100

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Revision	Date	Author	Description
0	09.12.2025	Dipl. Ing. (FH) Maik Lingies	Initial version

**Product Specification**  
**Oxygen Sensor**  
**OOD103-FDS100**

**Confidential - For Vandagraph only!**

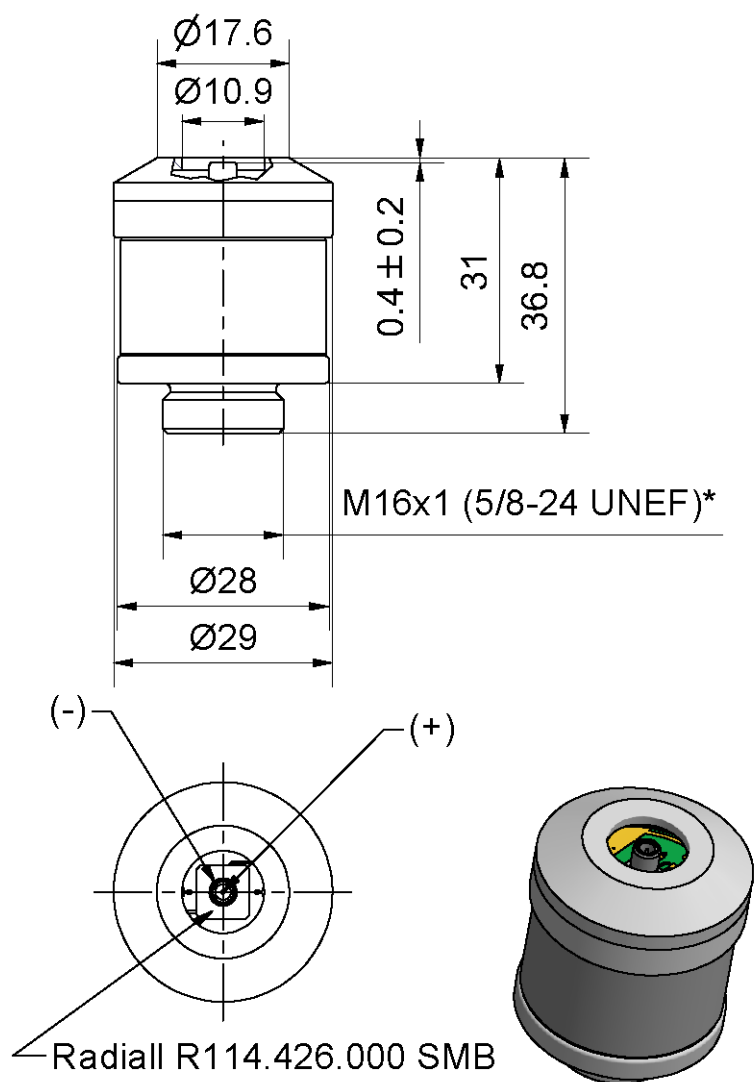
<b>Measurement Range:</b>	0 % ... 100 % oxygen
<b>Initial Output Signal in Ambient Air</b>	9 to 13 mV
<b>Electrical Interface:</b>	Mini HF (RADIAL R114.426.000)
<b>Repeatability:</b>	< 1% vol. O <sub>2</sub> @ constant temperature and pressure
<b>Linearity error:</b>	0.1 to 1.0 bar ppO <sub>2</sub> < 3% relative
	0.1 to 2.5 bar ppO <sub>2</sub> < 5% relative (at ppO <sub>2</sub> > 1.0 bar after 1 h equilibration time)
<b>Response time:</b>	< 5 sec. to 90% of final value
<b>Zero Offset Voltage:</b>	< 0.5% oxygen reading in 100% nitrogen @ 25°C after 36 seconds
<b>Cross Interference:</b>	< 0.5% vol. O <sub>2</sub> response to: 5% CO <sub>2</sub> balance N <sub>2</sub>
<b>Influence of Humidity:</b>	- 0.03% rel. per % RH at 25°C
<b>Pressure Range:</b>	600 to 2500 mbar
<b>Operating Temperature:</b>	0°C to 50°C
<b>Temperature Compensation:</b>	Built-in NTC compensation
<b>Effect of Temperature Compensation (steady state):</b>	Between 0°C and +50°C: 5% relative error
<b>Operating Humidity:</b>	0 - 99% RH non-condensing
<b>Long Term Output Drift:</b>	< 1% vol. oxygen per month
	Typically < -15% relative over lifetime
<b>Storage Temperature:</b>	-20°C to +50°C
<b>Recommended Storage:</b>	+5°C to +15°C
<b>Recommended Load:</b>	≥10 kOhms
<b>Warm-Up Time:</b>	< 30 minutes, after replacement of sensor
<b>Nominal Sensor Lifetime:</b>	500,000% vol oxygen hours
<b>Weight:</b>	Approximately 28 grams
<b>Warranty Period:</b>	15 months (including 3-month shelf life)
<b>Part No.:</b>	OOD103-FDS: E1002956 (REF 8010034 / FDS100)

**All specifications are applicable at standard conditions: 1013 mbar, 25°C dry ambient air.**

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Mechanical draft:



General tolerances ISO 2768-c  
\*Intermediate thread: Metric / Unified Extra Fine

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Customized Design Specification:

- Integration of additional Zitex membrane in sensor gas diffusion way
- Conformal coating on the sensor PCB with PLASTIK 70
- 2 x 2mm holes drilled in the sensor PCB
- No information about EnviteC on PCB top / bottom sides, information for ordering process and traceability only.

PCB Layout:

Top	Bottom

Product Labeling

OOD103-FDS: E1002956 (REF 8010034 / FDS100)	
Label on Sensor (90x15)	Label on Blister- Card (63,5x46,6)

Customer Approval

Date: 08/01/2026

Signature:

Steve Nixon  
Steve Nixon (Jan 8, 2026 11:16:21 GMT)